

REMARKS

Claims 1, 3-4, 12-14 and 16-28 remain in this application. Claims 16-28 stand withdrawn from consideration. Applicant respectfully requests re-examination.

Claim 1 was rejected under 35 U.S.C. §112 on the grounds that the claim contains subject matter which was not described in the specification. Applicant respectfully traverses.

The Office Action objected to the language in claim 1 “adapted to contain only one light bulb as not being supported in the specification because the specification stated the seamless tube was “sufficiently flexible to allow insertion of one or more light bulbs.” Applicant respectfully submits that the specification discloses alternate embodiments. Although the specification does describe an exemplary illustration of a disposal tube “for disposing of or handling one or more light bulbs” (page 3, lines 13-14, page 4, line 1), the specification also describes a disposal tube 10 which includes a heavy paper liner 20 (page 4, lines 7-8). The use of this embodiment, as described on page 4 of the specification, expressly points out “closed end 12 prevents the light bulb from passing through disposal tube 10. Open end 11 of disposal tube 10 is open to permit insertion of the fluorescent bulb, or any bulb to be transported, stored or discarded. Once the bulb has been inserted into tube 10, open end 11 may be closed and sealed using any means of sealing...” (page 4, lines 24-27). This is a clear description of a one bulb tube.

The specification goes on to describe the use of this preferred embodiment of the invention, “a user slides the fluorescent bulb fully into disposal tube 10 (step 100). Open end 11 of disposal tube 10 is then sealed, preferably close to the end of the bulb (step 101). Disposal tube 10 is then preferably placed on the ground and struck with a hammer, mallet or similar blunt force object without danger of injury from broken glass (step 102a)” (page 5, lines 3-8). The description concludes by stating “In a preferred

embodiment, disposal tube 10 is disposed of along with the glass. Therefore, disposal tube 10 is utilized for a single bulb” (page 5, lines 13-14).

Applicant respectfully submits that the specification fully supports a disposal container adapted to contain only one light bulb. Applicant respectfully request that this rejection be withdrawn.

Claims 1, 3 and 10 were rejected under 35 U.S.C. §102(b) as anticipated by *Lawrence et al.* (US 5,553,708). Applicant respectfully traverses.

Lawrence et al. is directed to providing a package system 10 for shipping spent fluorescent lamps 12. The *Lawrence et al.* packing system is made up of a container 20 which has a rectangular paper board box with four side walls and upper and lower said flaps. Inside this container, *Lawrence et al.* places a plurality of sleeves 22 and shock absorbing pads 24, at the ends of the container 20. The sleeves are made from a spirally wound strip of paper board finished to form a smooth tube. The tube has a diameter that closely encircles one of the fluorescent light bulbs 12 which are to be shipped. The tubular sleeves 22 extend the full length of the paper board container between the two end pads.

Lawrence et al. specifically teaches that the container 20 is preferably sized to hold 64 tubular sleeves in an 8 x 8 array. As shown in Figure 4 of *Lawrence et al.*, each corner sleeve is left empty because the corner sleeves 22 are the ones most at risk for being deformed if the container 20 is dropped (column 5, lines 14-16). The carrying capacity of the container is 60 lamps with 64 sleeves (column 5, lines 22-25).

Lawrence et al. suggests that “the sleeves 22 and end pads 24 can be sealed up in a plastic bag 26 that lines the container 20...” (column 4, lines 15-18). The flexible bag 26, according to *Lawrence et al.*, is a 4 mil thick polyethylene bag. The bag is inserted into the mouth 44 of the container in order to line the bottom and side walls 36 and 32 and is extra long to leave a portion or neck extending from the mouth which can be tied off and folded over into the container (column 4, lines 47-55). *Lawrence et al.* specifically states that “sleeves 22 are disposed in bag 26” (column 4, line 65).

Lawrence et al. points out that the end pads 24, which include a layer of foam 54, are located within the flexible bag 26 in a manner which has it “fully occupying each open end of a sleeve 22 for sufficiently forming a seal with the ends of the sleeve 22. This will capture pieces of any broken lamp including shards of glass, the phosphors and so on” (column 5, lines 63-68). *Lawrence et al.* states that this is important because “Containing the shards of glass importantly insulates the bag 26 from injury” (column 5, line 68 to column 6, line 1).

Lawrence et al. teaches that his packaging system 10 has an outside paper board container 20 sufficient for holding 60 fluorescent lamps and 60 paper sleeves, with which sleeve closely encircle a respective fluorescent lamp. These paper sleeves are sealed at both ends by a foam material 54 that causes the elements of any broken lamp to be contained within the respective sleeve paper board 22. The sleeves 22 sealed by the foam end pads 24, according to *Lawrence et al.*, may be contained within a bag 26. The *Lawrence et al.* structure, therefore, is an outside box lined with a plastic bag 26 which contains a plurality of tubes, each tube closely encircling an individual fluorescent bulb, with the tube ends individually sealed by foam end pieces.

Lawrence et al. does not show, teach or contemplate “a disposal container for spent fluorescent bulbs comprising: a tube of 2 mil puncture resistant plastic having an open end and a sealed end, the tube being from about three inches to about three feet long; and means for sealing the open end after a spent fluorescent bulb is inserted inside the tube, thereby providing a glass shard puncture resistant gas impervious container for the fluorescent bulb.” *Lawrence et al.* expressly teaches that his paper board sleeves 22 “will capture pieces of any broken lamp, including shards of glass, the phosphors and so on” (column 5, lines 65-68).

With respect to claim 4, *Lawrence et al.* does not show, teach or contemplate the container “further comprising a strip of sulfur impregnated activated carbon paper located inside the tube for absorbing any gases, such as mercury, released from the broken fluorescent bulb.” According to *Lawrence et al.*, the only thing containing such material from a broken bulb is the paper board sleeve,

sealed at both ends by foam 54 seals. *Lawrence et al.*'s flexible bag 26 which the Office Action equates to the tube of the claimed invention has no part in this function.

With respect to claim 10, the tube of claim 1 is further defined as having a heavy paper liner. *Lawrence et al.* does not disclose, teach or contemplate a paper liner for his flexible bag 26. What he teaches is 64 sleeves 22, each of which closely encircles an individual fluorescent lamp 12 contained within his bag 26. Sixty-four paper board tube-like sleeves can hardly be considered a liner for a tube.

Applicant respectfully requests this rejection be withdrawn.

Claim 11 was rejected under 35 U.S.C. §103(a) as unpatentable over *Lawrence et al.* Applicant respectfully traverses.

Applicant's 2 mil puncture resistant plastic is chosen so that it is the first line of defense against the shards of glass and emitted gases from the broken fluorescent bulb. *Lawrence et al.* on the other hand, chooses a 4 mil thick plastic bag 26 to contain 64 paper board tubes which are individual sleeves for 60 fluorescent bulbs. According to *Lawrence et al.*, it is the individual paper board sleeves which are the first line of defense against the shards of glass and phosphors from the broken bulbs. *Lawrence et al.* chose the 4 mil thickness of his bag so that it would carry 64 lamps encased in individual paper board sleeves. This is hardly a teaching to provide a tube of 2 mil puncture resistant plastic for containing a fluorescent tube and providing a glass shard puncture resistant gas impervious container. *Lawrence et al.*'s flexible bag 26 is not performing the same function as the tube of the claimed invention.

Applicant respectfully requests that this rejection be withdrawn.

Claims 4, 5, and 12-14 were rejected under 35 U.S.C. §103(a) as unpatentable over *Lawrence et al.* in view of *Cullen* (US 5,069,694). Applicant respectfully traverses.

Cullen is directed to a packet that comprises an envelope 11 made up of sheets 13 and 15 of carbon loaded paper. In other words, powdered carbon 19 is disbursed within the paper sheets. Contained within this envelope of carbon loaded paper, is granular material 12 such as silica gel, activated charcoal, calcium sulfate, etc. for the purpose of absorbing moisture. The carbon loaded paper which

forms the envelope absorbs undesirable odors. The granular material within the envelope absorbs only moisture.

Claim 4 specifically requires "a desiccant package of sulfur-impregnated activated carbon granules located inside the tube." Although *Cullen* may be disclosing the use of activated charcoal for his granular material inside his envelope of carbon loaded paper, he does not disclose, teach or contemplate the use of sulfur impregnated activated carbon granules. That is because *Cullen* is not concerned with containing mercury and the deleterious gases from fluorescent tubes. *Cullen* is only concerned with removing undesirable odors and moisture.

With respect to claim 5, *Cullen* does not show, teach or contemplate using a strip of sulfur-impregnated activated carbon paper located inside the tube. *Cullen's* paper is only impregnated with powdered carbon 19 disbursed therein (column 2, lines 26).

Applicant respectfully requests that this rejection be withdrawn.

In light of the above amendment and remarks, Applicant believes that all the claims under consideration are in condition for allowance and respectfully requests an early indication of the allowance of these claims.

Very truly yours,

SNELL & WILMER L.L.P.



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